REMARKS

Claims 1, 11, 17, 24 have been amended. Claims 10, 16 and 23 have been canceled. Claims 25-27 have been newly added. Specific support for the amendment to Claim 1 can be found in Experimental Example 5 on page 28 in which a unit dose of 0.24 mg was given to a human volunteer, and in the last paragraph of page 16 in which the maximum unit dose is given as 3 mg per kg of body weight. One of ordinary skill in the art would recognize that a typical human has a mass of 70 kg; thus, the maximum unit dose would be 210 mg. Applicant respectfully requests entry of the amendments and reconsideration of the application in view of the amendments and following remarks:

Rejections under 35 U.S.C. § 102

1) Claim 1 and 21-22 are rejected under 35 U.S.C. § 102 (b) as being anticipated by WO98/42188('188). The Examiner asserts that the claimed composition "kaempferol-3-glucoside" has been disclosed in reference ('188), and that the product-by-process limitations of Claims 21 and 22 have not been given patentable weight. However, as presently amended these claims are directed to a composition in unit dosage form to treat type 1 allergic human diseases in an amount of about 0.24 mg to about 210 mg. These dosages are not described in the '188 publication. Accordingly, withdraw of rejection to Claim 1 under 35 U.S.C. 102(b) is respectfully requested.

2) The Examiner asserts that Claim 1 and 18-22 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent 4,808,574 ('574). The Examiner asserts that '574 discloses kaempferol-3-glucoside (column 2, lines 61), and that Kaempferol-3-glucoside can be combined with a food product or an alcoholic beverage.

However, like the '188 publication, the '574 patent failes to disclose the specific recited unit dosages used to treat pollinosis in humans. Thus, for the same reason set forth above, the claims cannot be anticipated by reference '574.

Rejections under 35 U.S.C. § 103(a)

Claims 1, 10-22 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,808,574 ('574) in view of Fukumoto et al and JP 110296561A ('561). The Examiner asserts that '574 teaches a medicinal composition comprising kaempferol-3-glucoside

dispersed in a food product or a beverage, and that Fukumoto et al teach medicinal compositions isolated from plant, which include kaempferol-3-glucoside. The Examiner asserts that these compositions have the ability to inhibit IgE-medicated anaphylaxis in mice. However, as already mentioned above, Claim 1 has been amended to add the limitation of daily doses which can not be taught in the cited references ('574) in view of Fukumoto et al and JP ('561).

Fukumoto et al. merely discloses that a medical composition obtained from *Impatiens balsamia* L. alleviates several types of dermatitis including urticaria (page 202, left column). This reference also discloses that kaempferol-3-glucoside inhibits IgE-mediated anaphylaxis in mice (page 202, left column) and release of IgE-promoted histamine from mast cells (page 205, right column, lines 4-8).

JP 11029561 ('561) '561 discloses a novel compound having suppressive effects on IgE production (claim 1), an agent for suppressing abnormal IgE production, and medicines for preventing and treating immunologic diseases caused by abnormal IgE production. Further, none of these references disclose administration of astragalin in an amount of 0.48 mg per day per adult to 3 mg per day per kg of body weight, or the effects achieved by administering astragalin in such amount.

Moreover, the present invention provides unexpected advantages that clearly evidence the nonobviousness of the claimed invention. The unexpected advantages can be obtained as shown in Table of Experimental Example 5 in such amount recited in claim 1, table 1 reveals that, in humans ingesting astragalin in an amount of 0.48 mg per day per adult, symptoms of pollinosis are inhibited, but relapsing when ingestion is stopped. That is, the table shows that administration of astragalin in an amount specified by the present invention exhibits extremely high inhibitory effects on human pollinosis.

Table 1.

	Sneezing	Nasal Discharge	Nasal Congestion	Impediment to daily life
While drinking	23±21	21±26	3±3	1 ±2

After stopping drinking	68±79	62±83	13±11	10±10
P value	0.001	0.003	0.003	0.005

In contrast, the references do not disclose administration of astragalin in an amount of 0.48 mg per day per adult to 3 mg per day per kg, but merely teach atopic dermatitis or pollinosis examples, among many other target diseases. The unexpected results of the present invention would not have been expected from such disclosures of references.

As described above, '574 only teaches to use of kaempferol-3-glucoside in the treatment of an addiction to alcohol. Fukumoto et al. merely discloses that an ethanol extract of *Impatiens balsamina* L. inhibits IgE-mediated anaphylaxis in mice. '561 merely discloses that immunologic diseases, of which atopic dermatitis and pollinosis are examples, can be treated by decreasing blood IgE level.

In other words, the cited references do not disclose the amount of astragalin to be administered, i.e., an essential feature of the composition of claim 1, nor the effects of the present invention, i.e., remarkable therapeutic effects on human atopic dermatitis and human pollinosis.

The Examiner asserts that the compounds having the ability to inhibit IgE production, such as kaernpferol-3-glucoside, can be used to effectively treat allergy-related disorders such as pollinosis (page 5 of the Action). However, increase in blood IgE level does not necessarily cause pollinosis, for the following reasons:

Allergy 51 (11) 1083-1094, 2002 (please see Appendix 2 and Appendix 3 attached hereto) shows the results of researching the influence of aging on the relation between the prevalence of Japanese cedar pollinosis and serum Japanese cedar IgE levels. The results are summarized below.

1. In subjects in their 40s, Japanese cedar IgE antibody levels changed in accordance with the amount of pollen scattered. In contrast, in subjects aged 60 and over, no change in lgE antibody levels in accordance with the amount of pollen scattered was observed (Fig. 1A).

2. Comparison of Japanese cedar IgE antibody levels (Fig. 1A) with the prevalence of Japanese cedar pollinosis (Fig. 1 B) shows that subjects with low IgE antibody levels can develop Japanese cedar pollinosis. For example, subjects in their 70s developed pollinosis in the same year in the same proportion as subjects in their 50s, even though the former subjects had much lower Japanese cedar IgE levels than the latter subjects.

3. In contrast, infants who had once developed pollinosis develop Japanese cedar pollinosis in pollen-scattering seasons in the following years, even when the amount of antigen exposure is notably reduced, regardless of the change in IgE antibody levels (page 1084, left column, lines 16-19).

The Examiner states that one of ordinary skill in the art would have easily conceived of using a compound capable of decreasing blood IgE levels for the treatment of pollinosis. However, as described above, increase in blood IgE levels is only one symptom of pollinosis, and it is highly possible that factors other than IgE are involved in a complex manner in the onset of pollinosis. Therefore, it is believed that pollinosis cannot be treated by merely decreasing blood IgE levels. Further, none of the references present experiments that demonstrate therapeutic effects on pollinosis or atopic dermatitis in humans.

The Examiner also asserts that US application 2002/0068094 A1 discloses a composition comprising kaempferol (paragraph 0021) which can be used in a method to treat pollinosis (paragraph 0036).

However, US2002/0068094 does not teach the amount of astragalin to be administered, which is one of the essential features in the present invention. Further, the reference indicates pollinosis as merely one example, among many other target diseases, and does not demonstrate therapeutic effects of raw indigo plant extract containing kaempferol, on humans. Using the composition of the present invention, astragalin is administered in a specific amount, resulting in

remarkable therapeutic effects on human pollinosis. Experimental Example 5 in the specification demonstrates such remarkable effects.

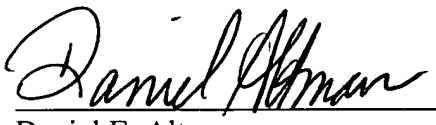
CONCLUSION

A three-month extension of time is respectfully requested. A check to cover the three-month extension is enclosed. Please charge any additional fees, or credit overpayment to Deposit Account No. 11-1410.

In light of the Applicant's amendments to the claims and foregoing Remarks, it is respectfully submitted that the present application is fully in condition for allowance, and such action is earnestly solicited. Should the Examiner have any remaining concerns, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: December 9, 2005 By: 

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